CONSTITUTION OF IMAGE OF MATTER SLICE

Publication number: JP60005127
Publication date: 1985-01-11
Inventor: NOOBAATO JIYOSEFU PERUKU; GARII HARORUDO GUROOBAA
Applicant: GEN ELECTRIC
Classification:
- International: ***G06T11/00;*** **G06T11/00**; (IPC1-7): A61B6/03; A61B8/14; G01N23/04
- european: G06T11/00T
Application number: JP19840087946 19840502
Priority number(s): US19830490604 19830502

Also published as:
EP0124015 (A2)
US4580219 (A1)
EP0124015 (A3)
EP0124015 (B1)

Report a data error here

Abstract not available for JP60005127
Abstract of corresponding document: **US4580219**

A method is provided for reducing streak artifacts in images reconstructed from projections having significant discrepancies between the first and last scan views due to subject motion or to scan geometry aberrations during a typical 360 DEG scan such as that utilized in computerized tomography. The views taken at the beginning and end of the 360 DEG scan are taken far apart in time, but in the image reconstruction process, they are treated as being adjacent. The method recognizes that in a 360 DEG scan each ray in a projection is scanned twice so that the data set contains redundant information. To reduce the inconsistencies, weights less than the nominal weight are assigned to original projections at the beginning and end of the scan, and the views near the middle of the scan containing corresponding redundant data are compensated so that the combined weights of all ray pairs are constant. In this manner, the inconsistency between the first and last views is feathered out, and the resulting image exhibits significantly reduced sensitivity to errors caused by the discrepancies. The method is effective regardless of the modality (for example, ultrasound, emission nuclear tomography, computerized tomography, nuclear magnetic resonance) used to obtain the projection data.